NTAC Peering and Routing Working Group
11/19/2019 Call Notes

1. Agenda Bash
   a. No bashing of the agenda
2. Update on peering and I2PX/I2
   a. I2PX has 2x 100G to Amazon in Chicago. Waiting on Amazon to turn up peering on their side. Should be live in the next day. Replacing 2x10's now.
   b. Looking to do the same in Ashburn and Dallas shortly.
   c. Ashburn, NY and Seattle are next for 100G to Apple.
   d. Equinix Ashburn public exchange – now have 100G link turned up to replace 3x10G LAG.
   e. Working to upgrade Seattle Six to 100G peering.
   f. Oracle 100G at Ashburn also pending.
   g. Lambert: do we know that these peers will prefer these routes over commodity? Bartig: No. Institutions can prepend, etc to influence. Lambert: but localpref always wins.
   h. Steve Wallace noted that Amazon uses "hot potato" routing to influence folks like I2 to carry traffic to closest peering link to where the data is actually housed.
3. Network weather update
   a. Release of Apple TV plus. Saw increased traffic from that and a new Disney streaming service. Expect traffic to begin tapering off as holidays approach.
   b. Dale: Who hosts Disney? Bartig: Most traffic seemed to come from Akamai and Fastly.
   c. Chris Wilkinson: first few segments of flexgrid are out in time for SC19. Carrying a 400G wave. Basically two carriers that are specially multiplexed together. 400G Traffic is live from SC19 now across 1400Km.
4. Results of the Survey
   a. 20 responses. 8 from campus 12 from regionals. 18 have entries in peeringdb. 17 take 12PX routes. 16 have peering relationships outside of I2PX.
   b. Content networks that people were interested in: the usuals.
   c. About half have CDN caches. Majority would be willing to share. Most said that if I2 could increase numbers, they would be more than happy to host.
   d. CDNs that are available: Google, Netflix, Akamai. Others likely NDA.
   e. Interested in getting Facebook Xbox Akamai Google
   f. 5 have Critical Internet Infrastructure. Most would be happy to host CII if needed.
   g. Tony: How we can better leverage a root server through I2?
   h. Steve Wallace: If anyone wants to host a root server, RIPE makes the process pretty easy. They are anycast. Suggest investigating "Serve Stale," a feature that can really help in making resolving infrastructure resilient. "If you can't reach upstream, go ahead and resolve what you had last."
   i. Dave Diller: would be glad to help anyone interested in anycasting d.root-servers.net anywhere else that would like to.

    j.   Tony: topics like this would be very good to discuss in person at TechX meeting.

    k.   Steve Wallace: discussion should also include the TLD.

    l.   Tony: also take advantage of Stratum 1 servers that are available.

    m.   Discussion: "Where'd the Internet Go?" How to survive an Internet outage.

    n.   Dale: one of the other reasons the survey was considered was to find out how much peering was going on outside of I2PX and whether or not it could be leveraged in any way.

    o.   I2PX peering at local peering exchanges: many members are already connected.

    p.   Tony: we seem to be at impasse in regards to figuring out how to clean up the R&E table. Thoughts on how to move forward/get things moving?

    q.   Dale: posing question as a topic at F2F is probably a good idea. Folks should think about consequences and bring your thoughts to F2F meeting. How could we mitigate these issues? How could we make it solvable? Eg, bring solutions as well as problems.

    r.   Jeff Bartig: IRR topic has also lost steam and needs to be re-invigorated. To that end, will be re-starting office hour meetings tomorrow. Topic will be "routing intent" – eg, localpref'ing I2 peerings. Newer generations of engineers may not be doing this or thinking the same way: eg, not thinking that some routes are more special than others. Tomorrow 11/20 3-4p EST.

5. December meeting/TechX

    a.   Not planning to have December phone call, as this would be the week after TechX. Please speak up if this is a problem.

    b.   FTF is Tuesday at 7:30am. No remote call-in available; could open up a zoom room if needed. Will see if there is anything that can be done for remote attendees.

6. AOB

    a.   None.